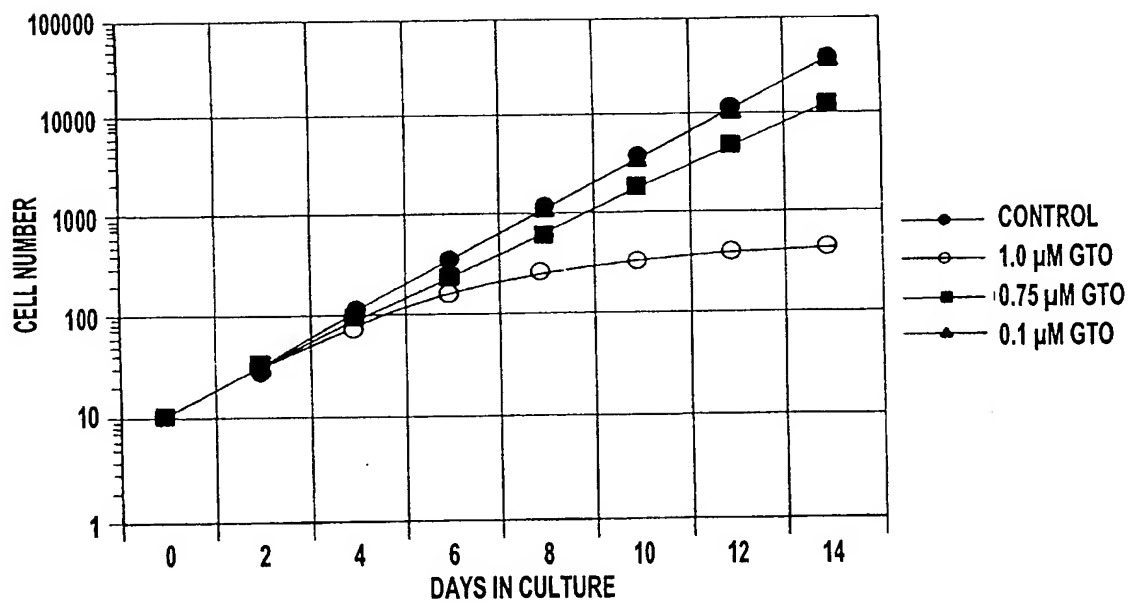
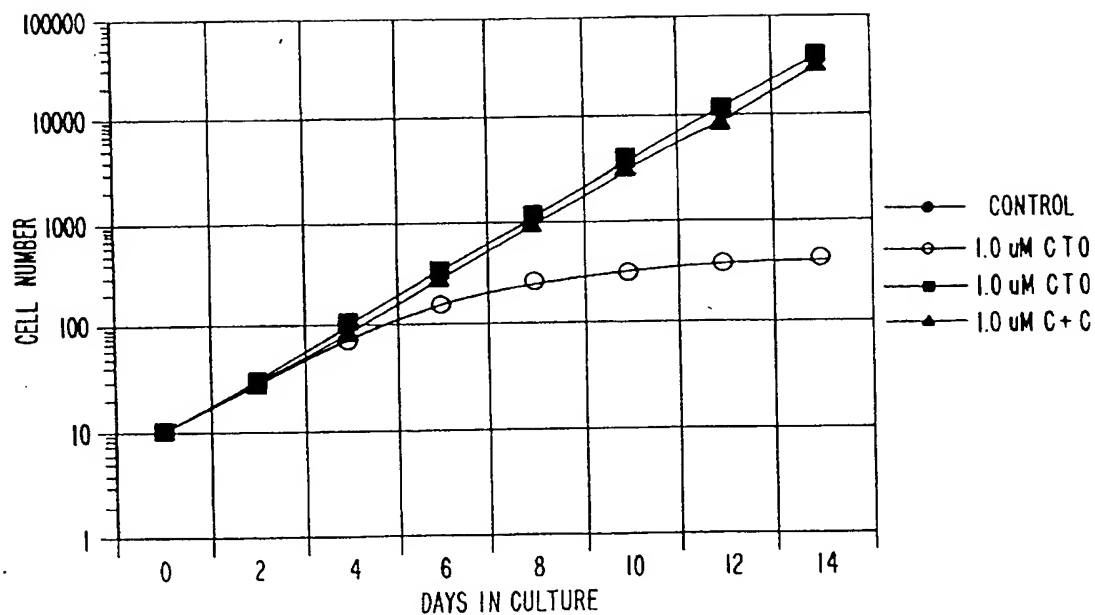


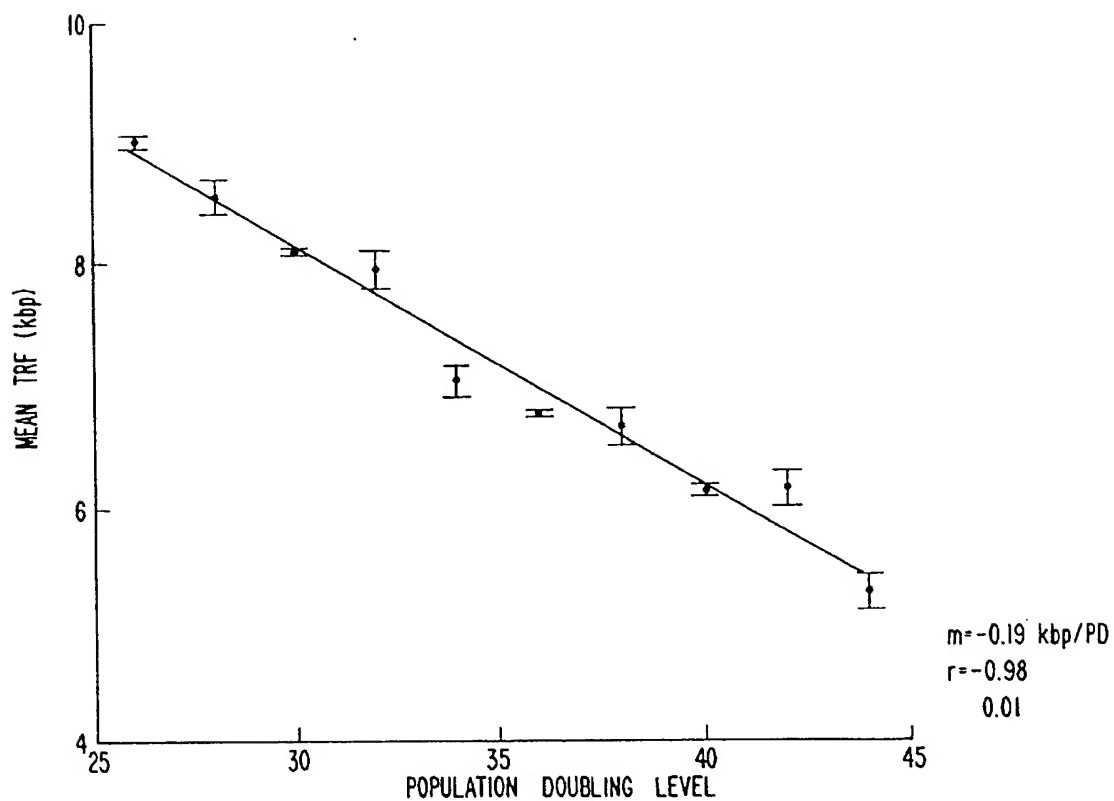
**Fig. 1**



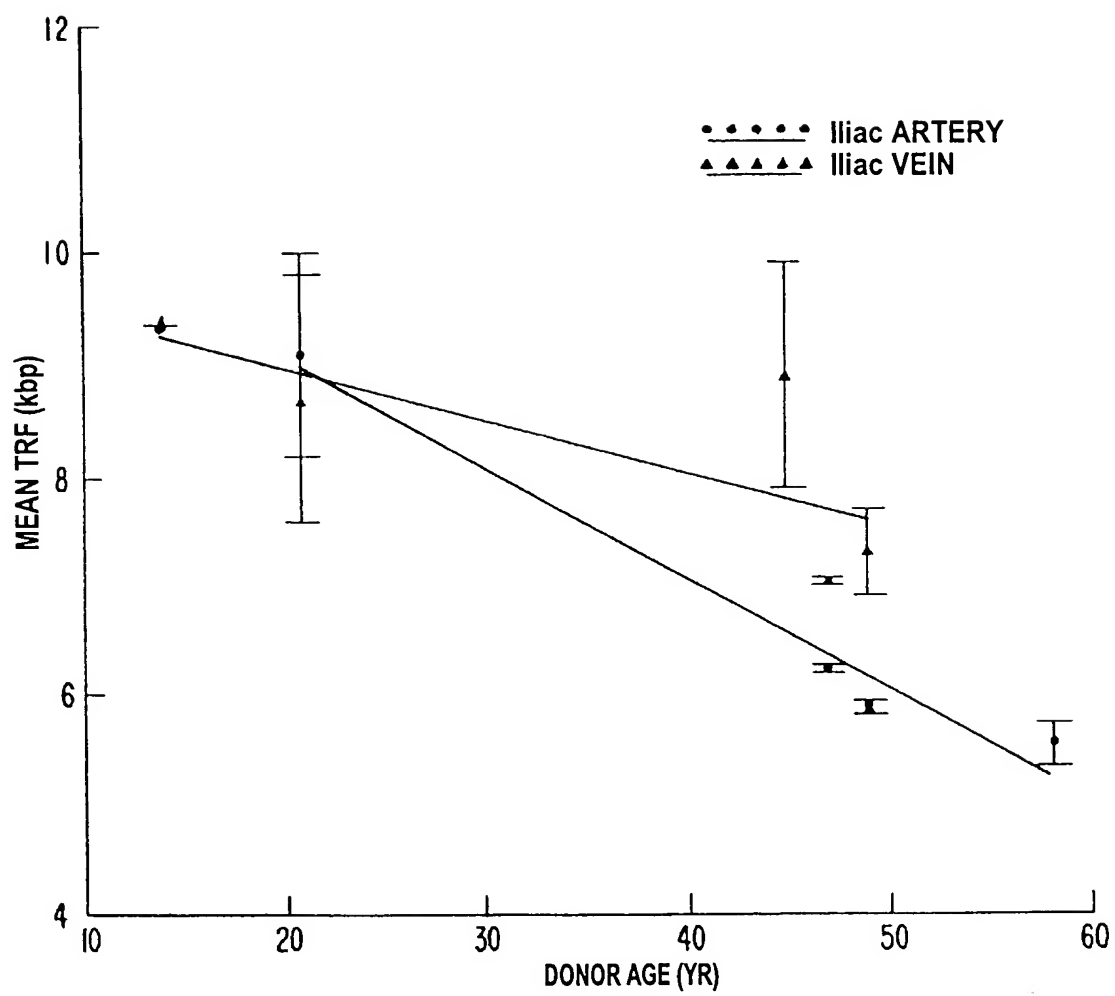
**Fig. 2**



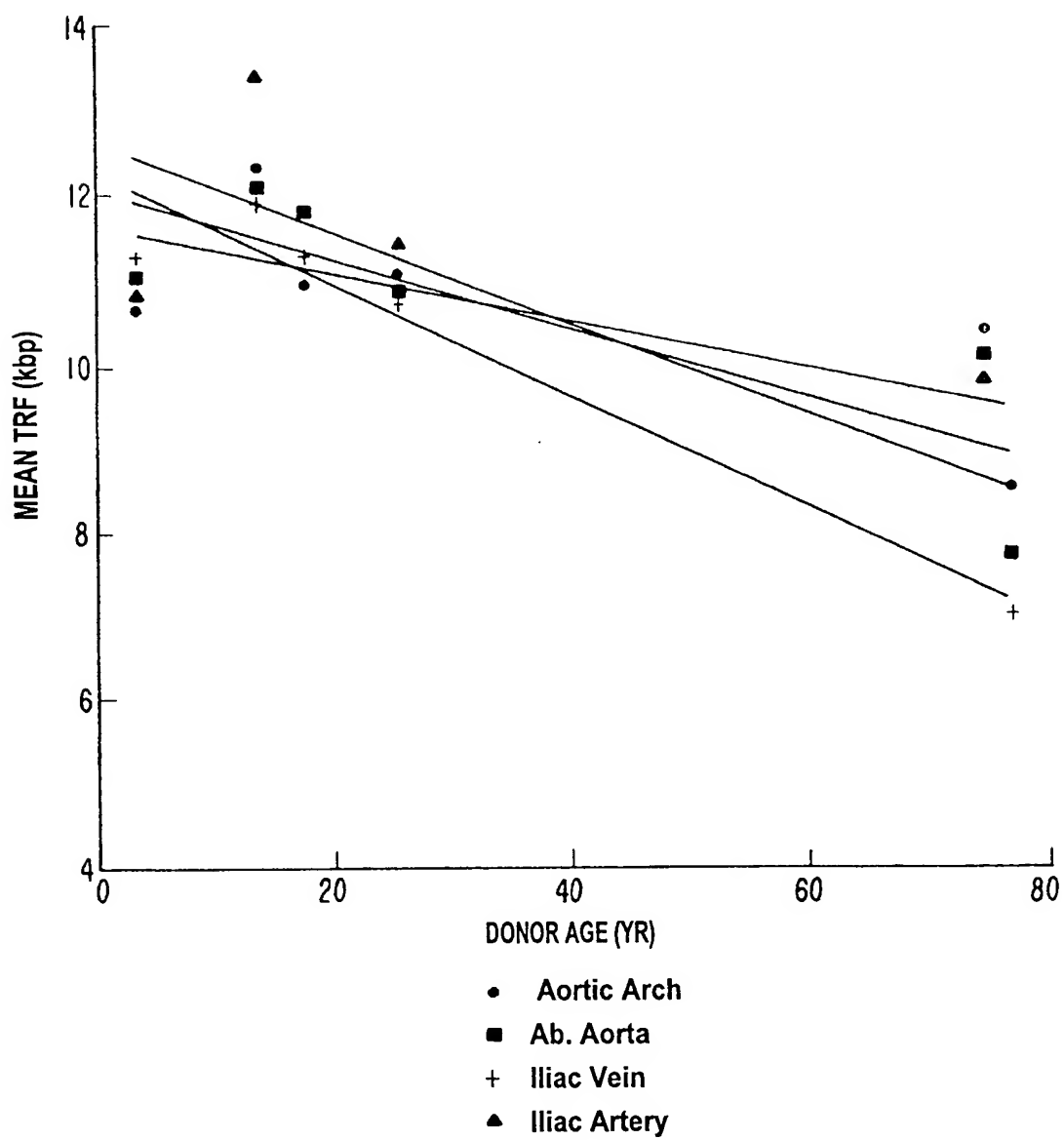
**Fig. 3**



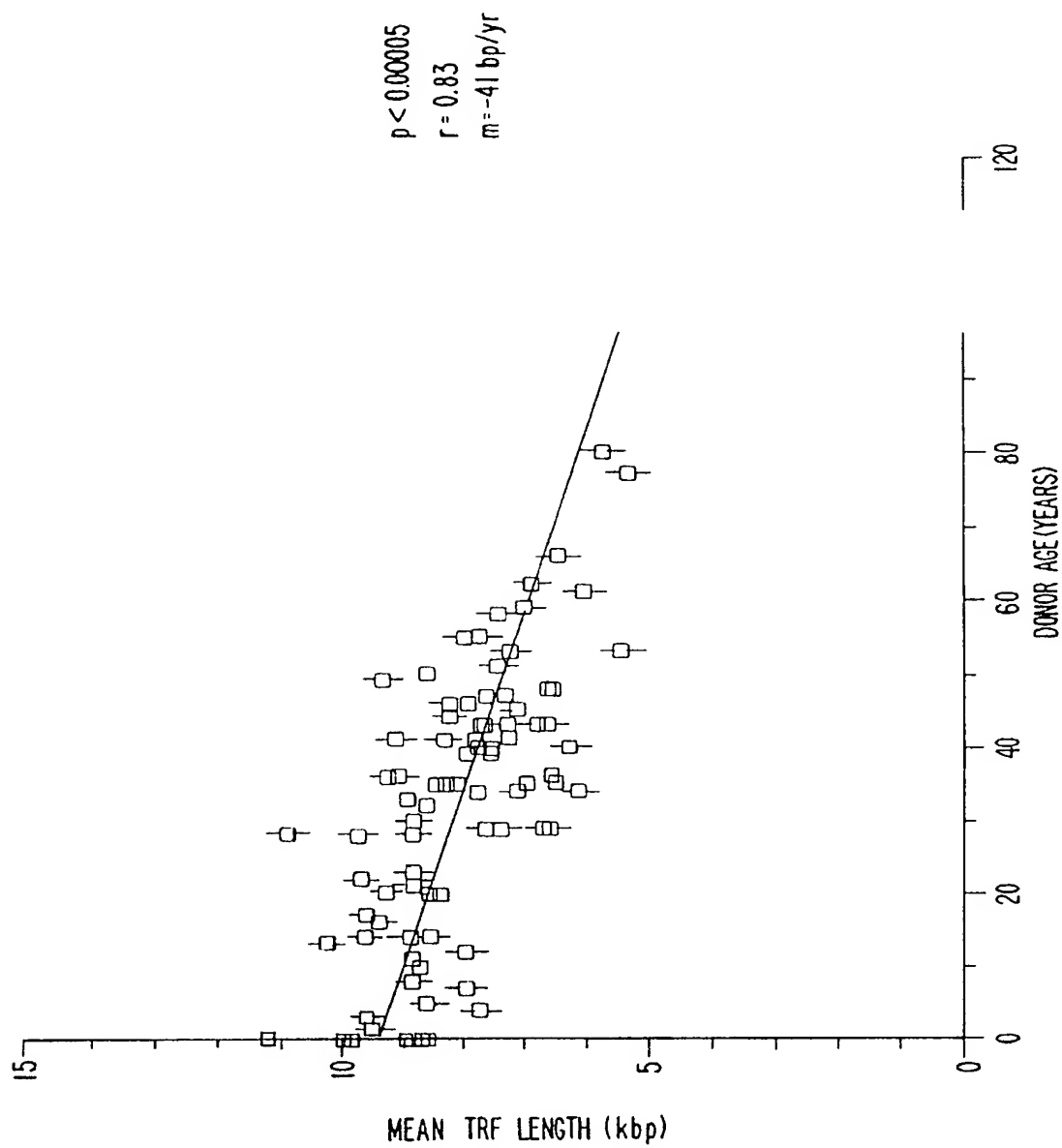
**Fig. 4**



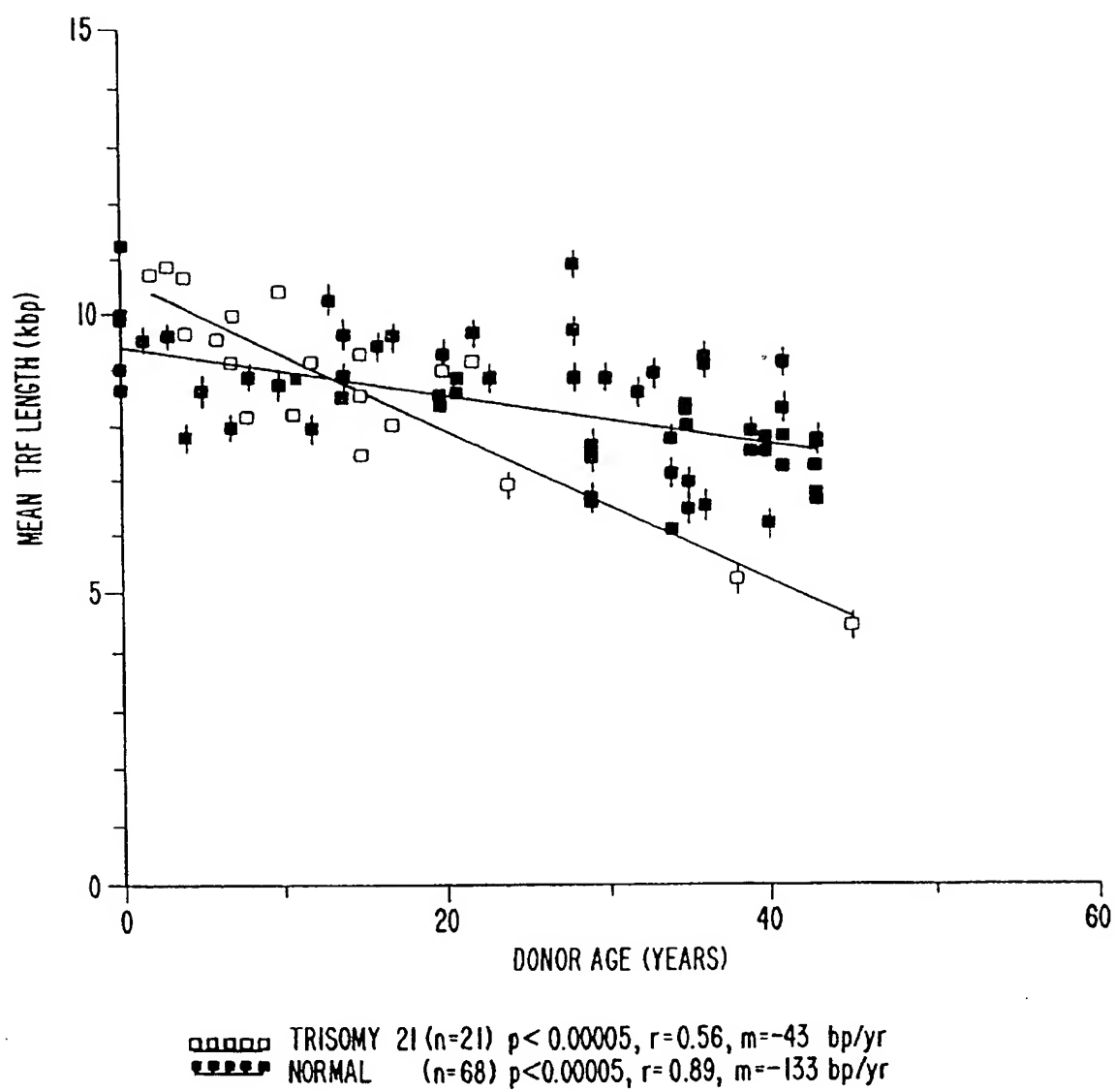
**Fig. 5**



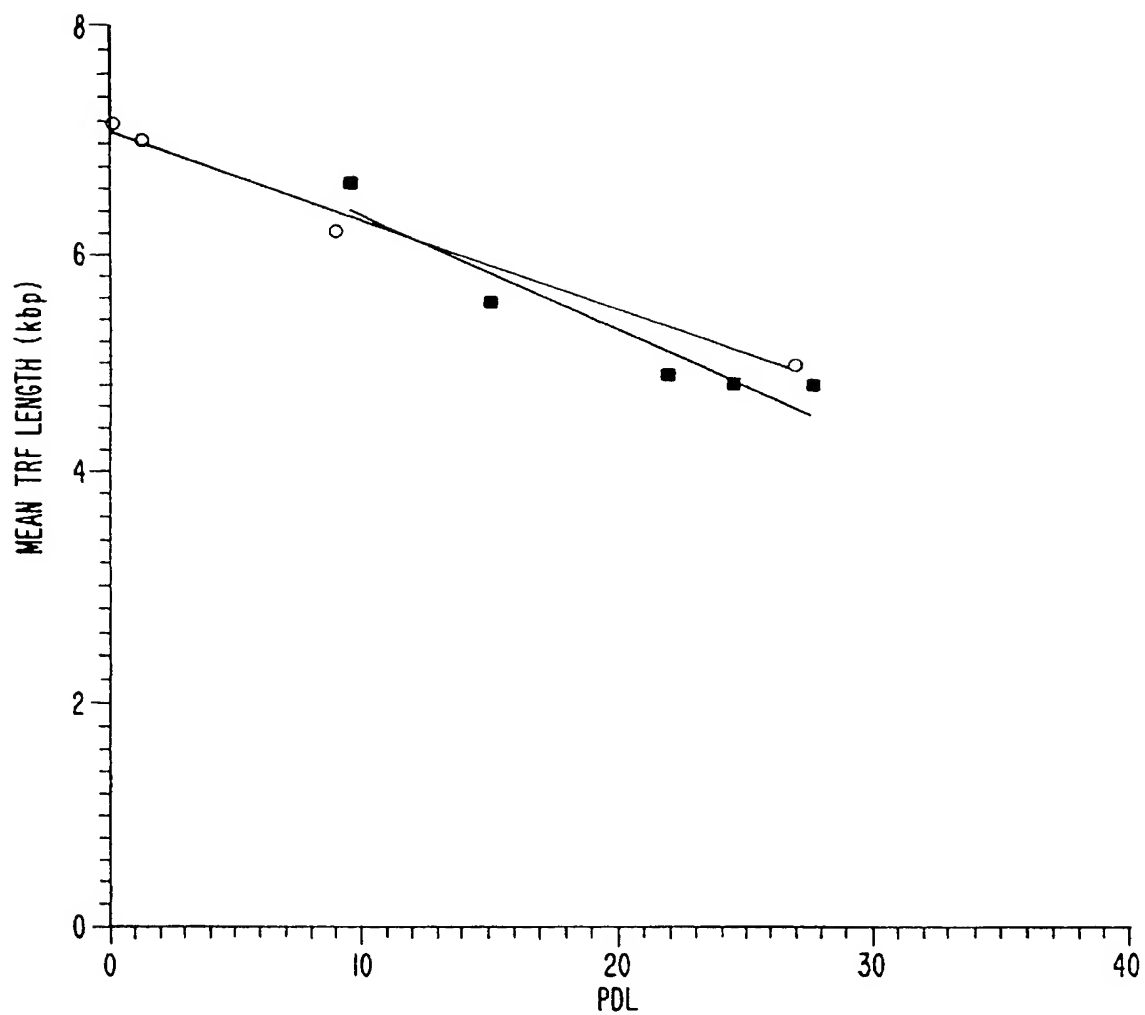
**Fig. 6**



**Fig. 7**

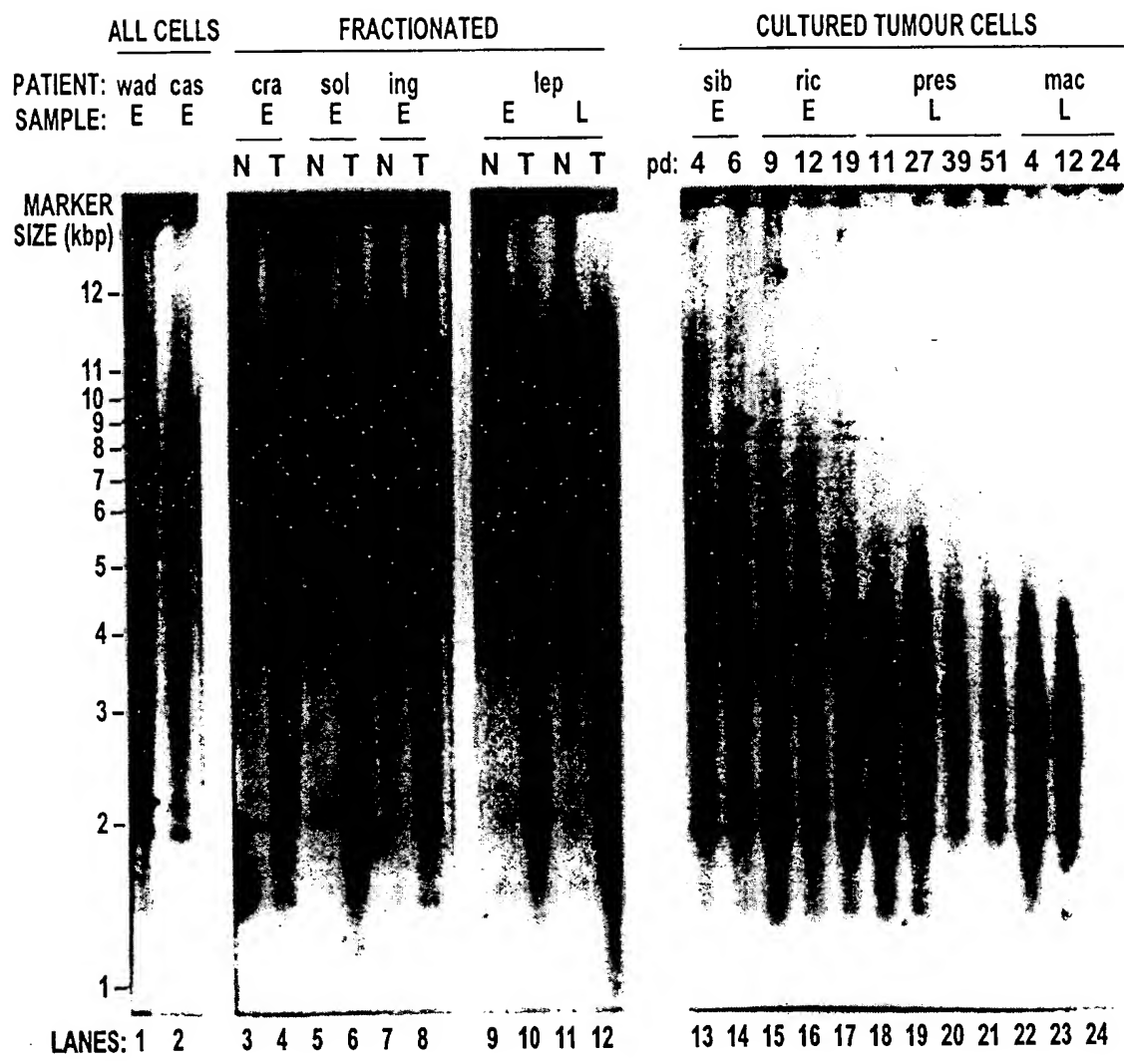


**Fig. 8**



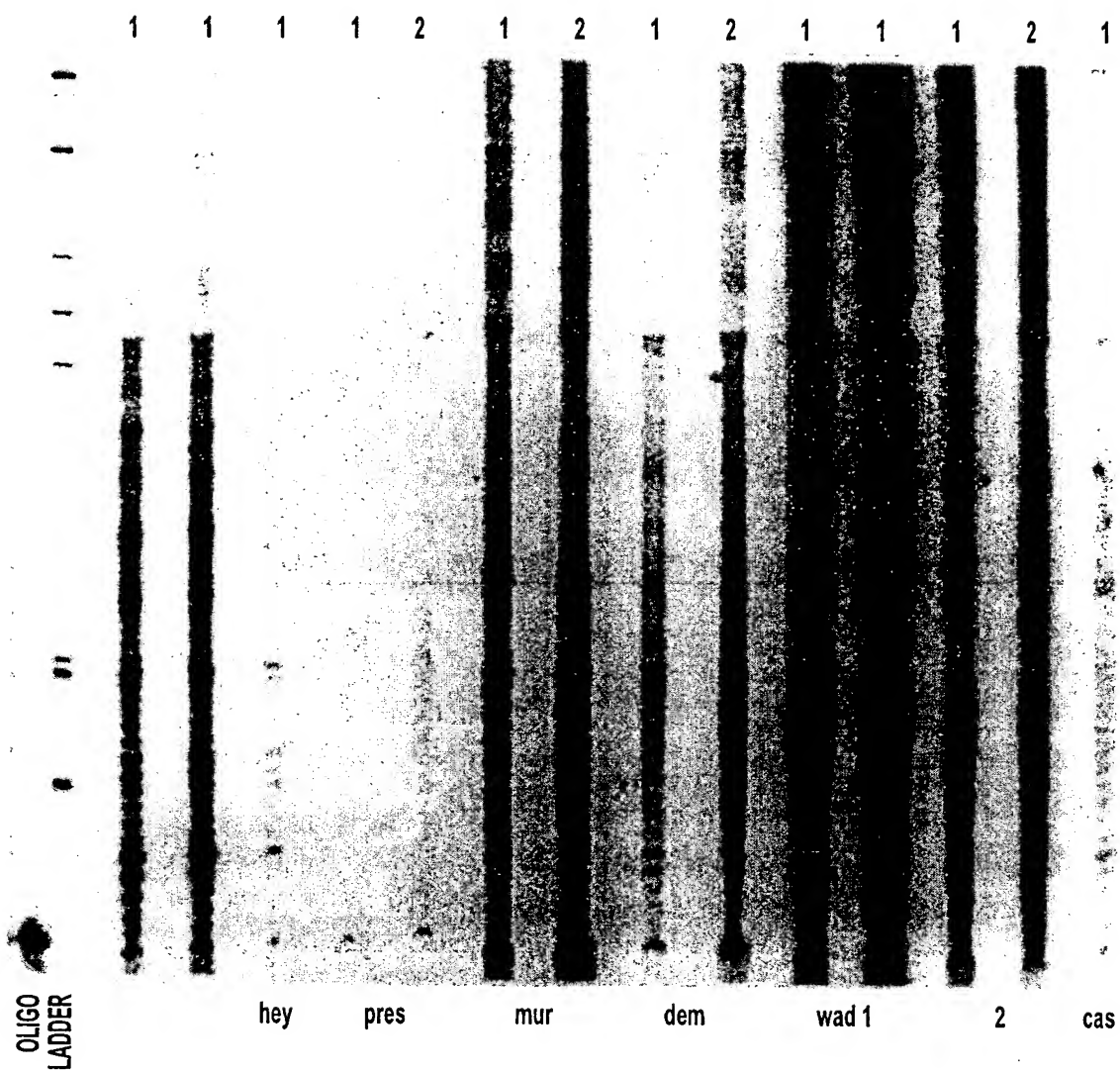
□□□□ RATE OF LOSS : 102 bp/PD  
 ○○○○ RATE OF LOSS : 79 bp/PD  
 ~~~~~ ONLY ONE DATA POINT (AT SENESCENCE) WAS AVAILABLE

**Fig. 9**

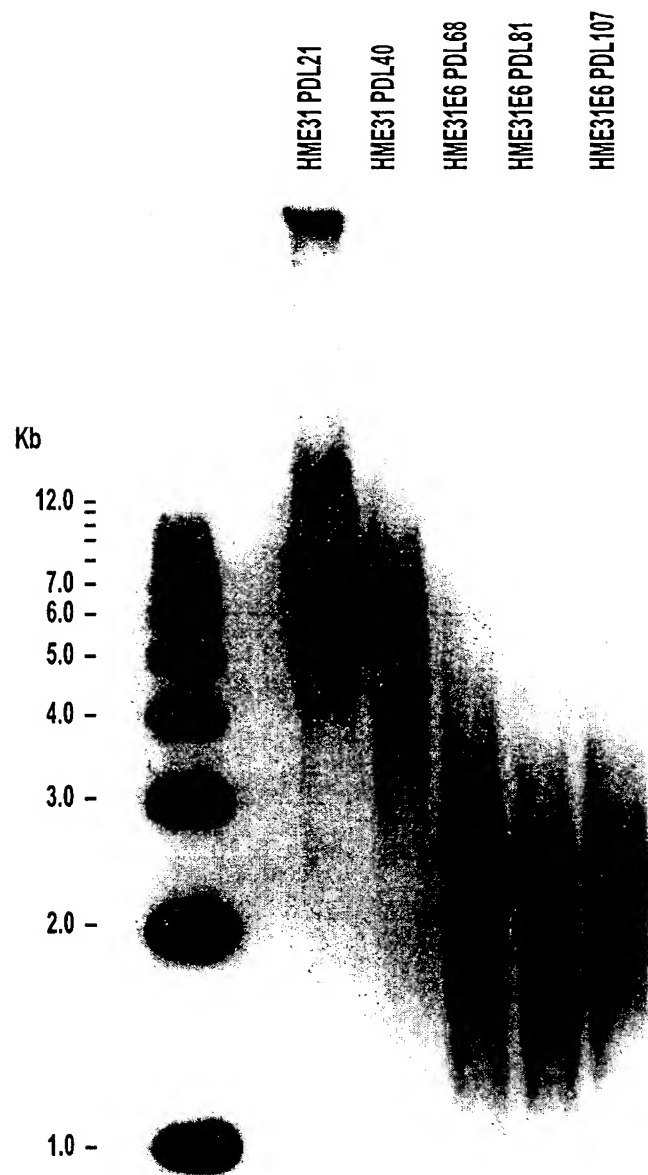


**Fig. 10**

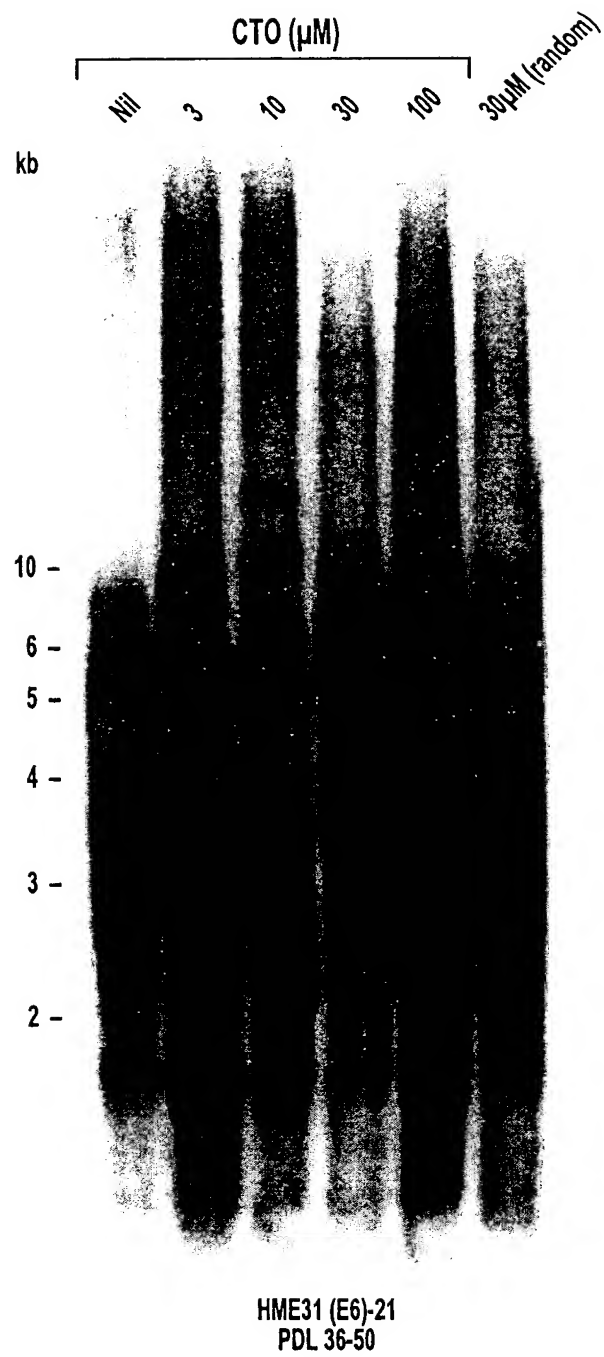




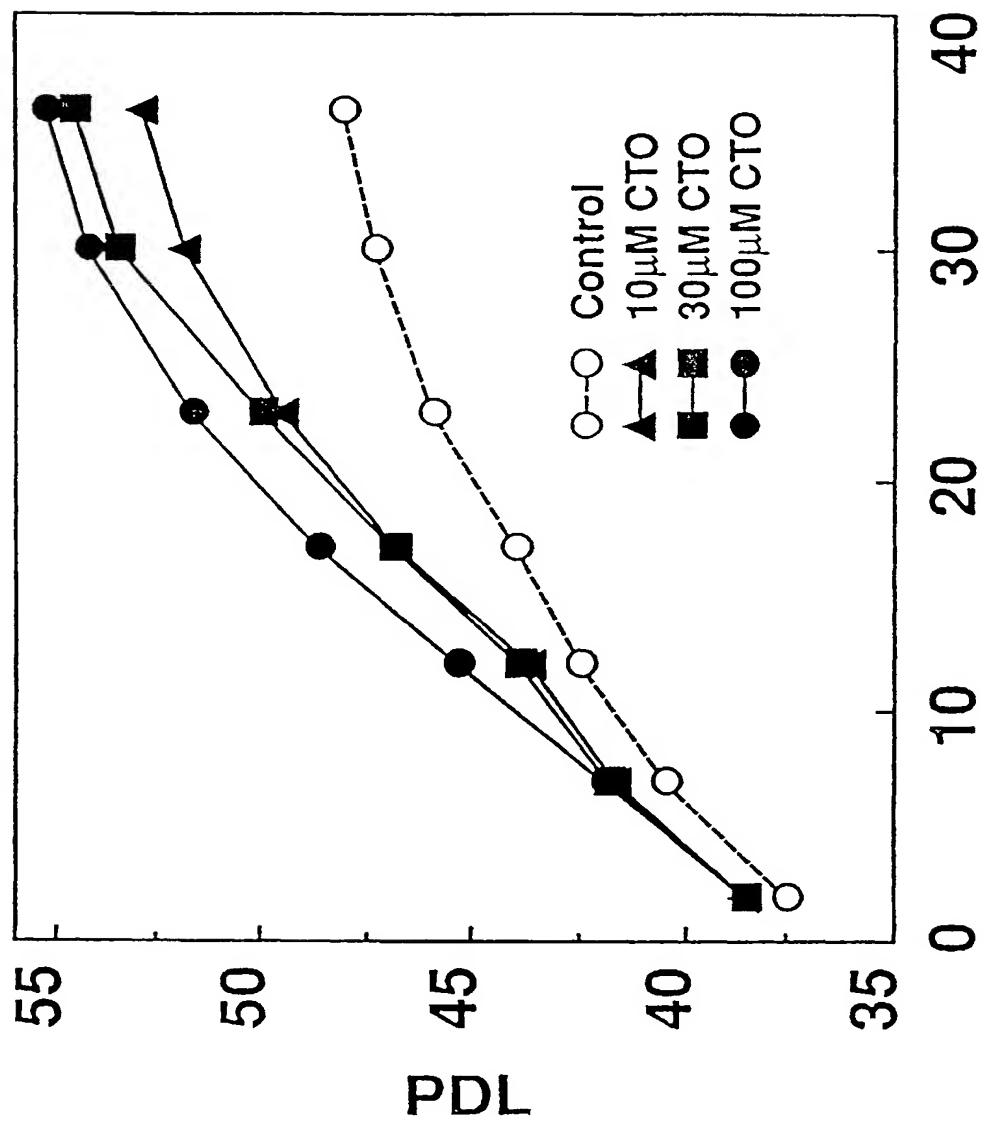
**Fig. 11**



**Fig. 12**

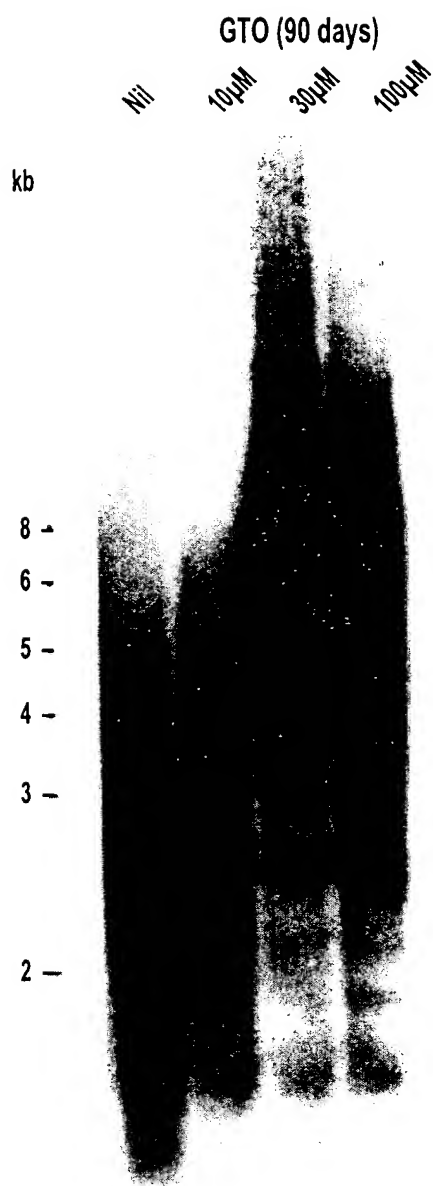


**Fig. 13**



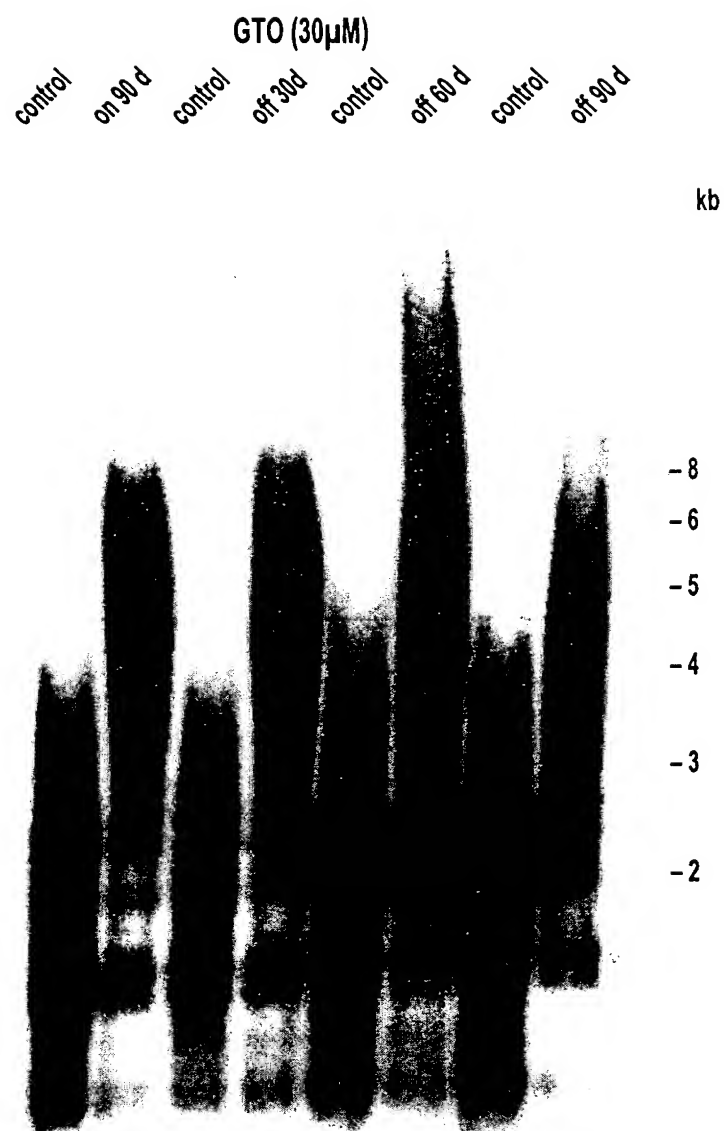
Days in Culture with CTO

Fig. 14



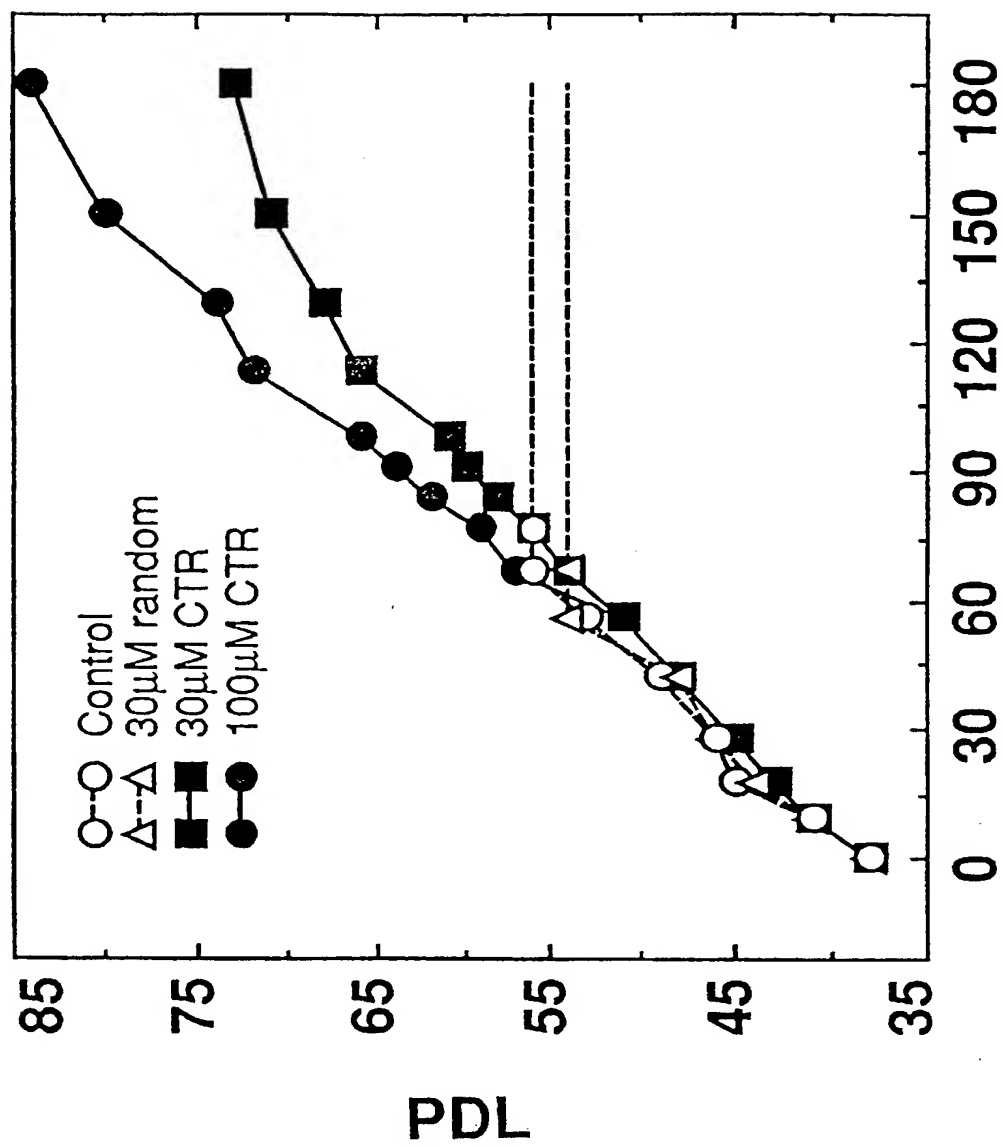
IDH4 cells

**Fig. 15**



IDH4 cells

**Fig. 16**



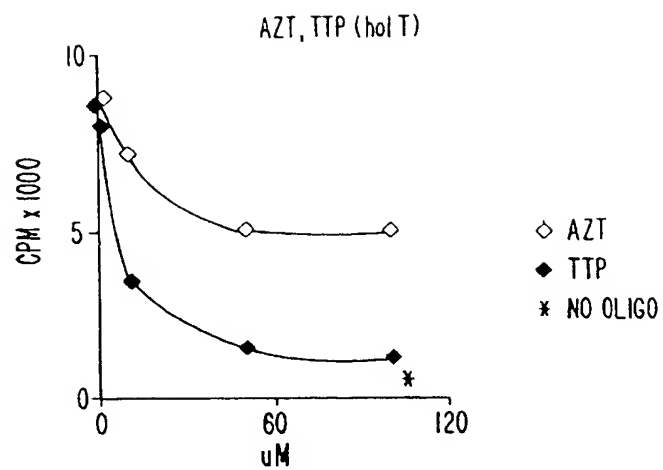
Days in Culture

Fig. 17

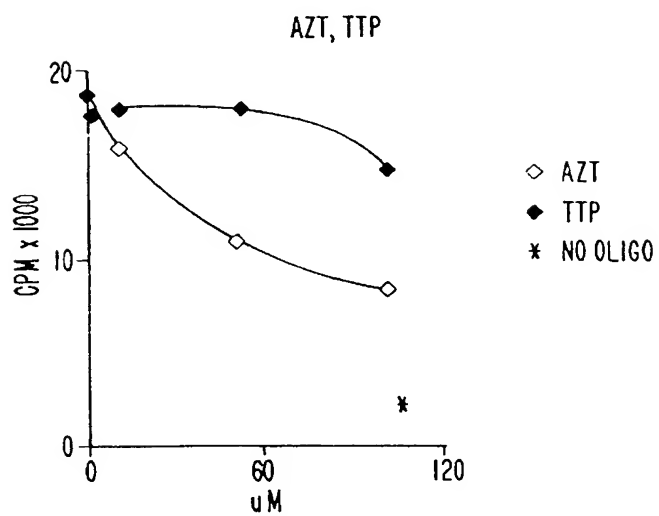




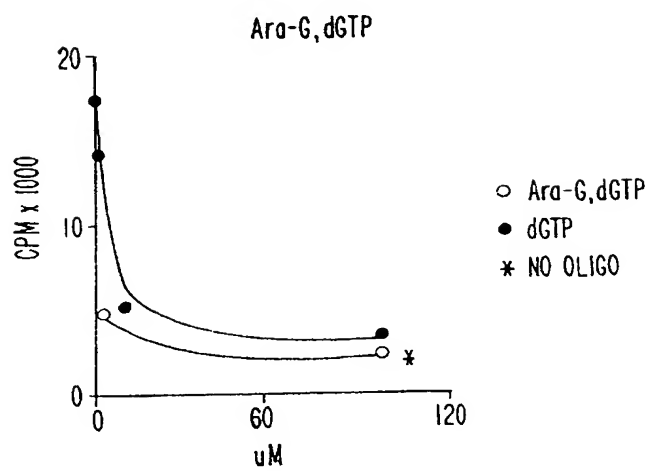
**Fig. 19A**



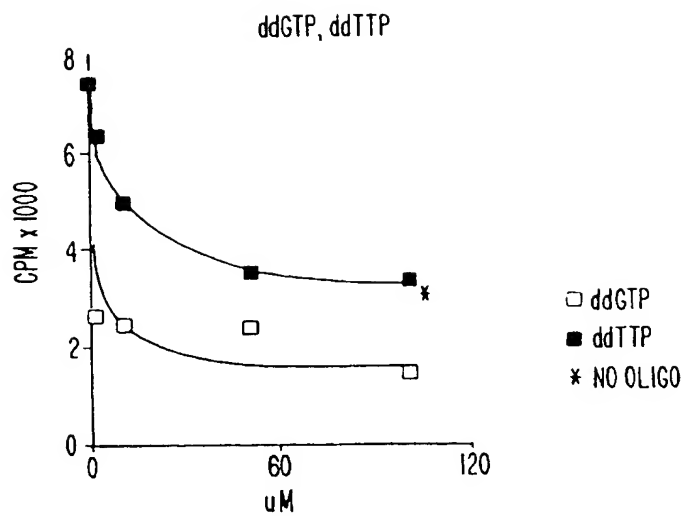
**Fig. 19B**



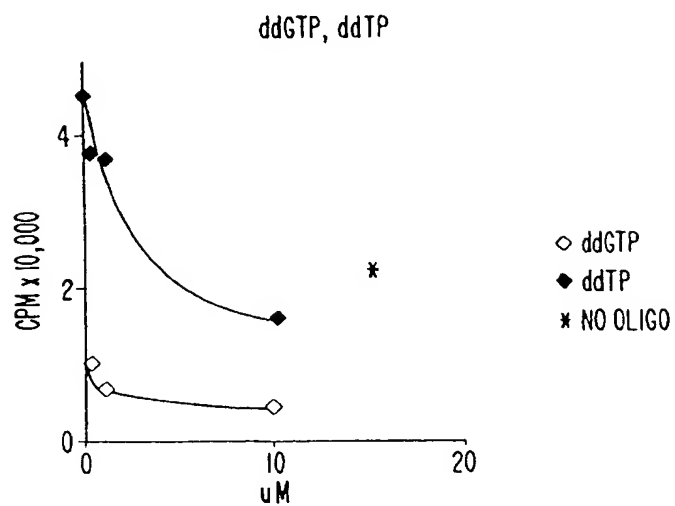
**Fig. 19C**



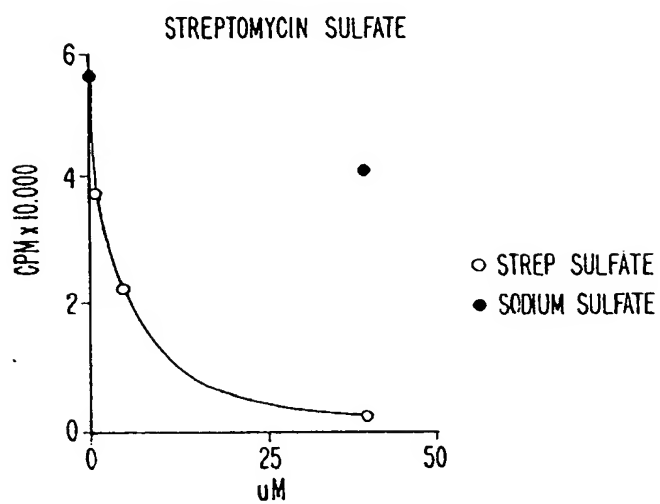
**Fig. 19D**



**Fig. 19E**



**Fig. 19F**



| <sup>32</sup> P label | dGTP  | TTP                       | dGTP  |
|-----------------------|-------|---------------------------|-------|
| competitor            | AZT   | cold TTP                  | Ara-G |
| μM                    | 0 100 | 0 1 10 <sub>no pri.</sub> | 0 1   |



Fig. 20A

| DMSO | control | μM ddGTP | μM ddTTP |
|------|---------|----------|----------|
|      |         | .1 1 10  | .1 1 10  |



Fig. 20B

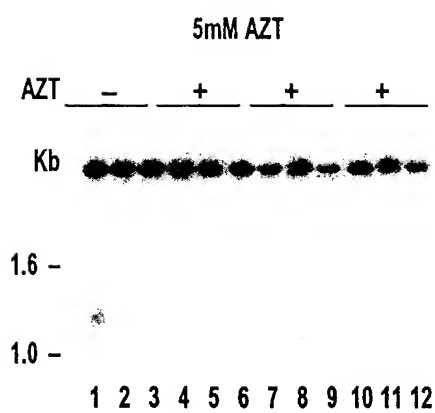


Fig. 21A

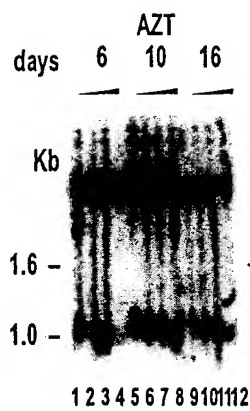


Fig. 21B

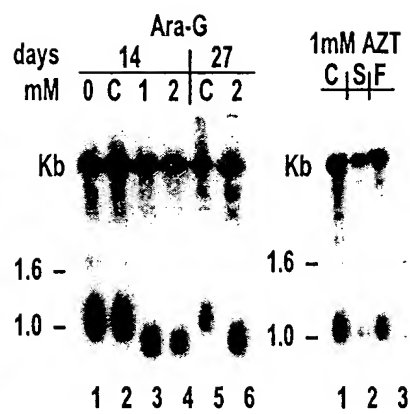
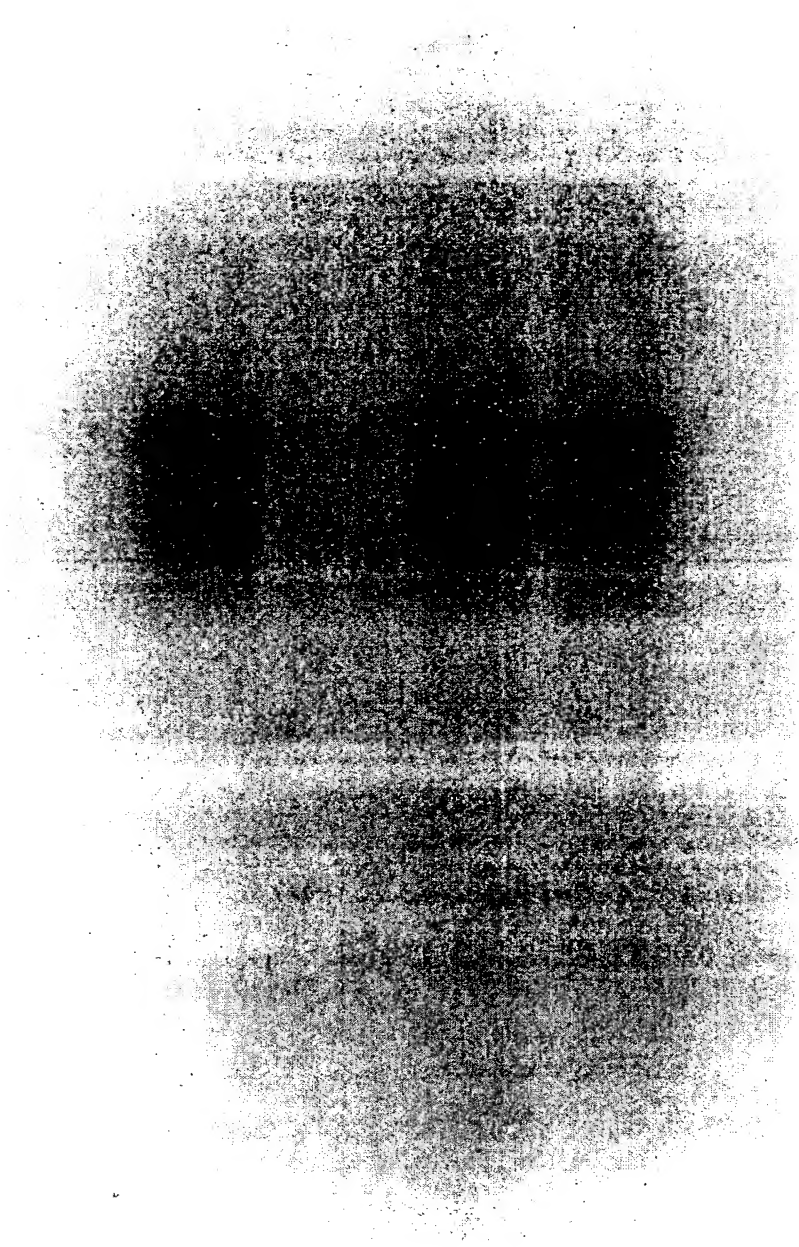


Fig. 21C

Fig. 21D

1 2 3 4 5 6



**Fig. 22**

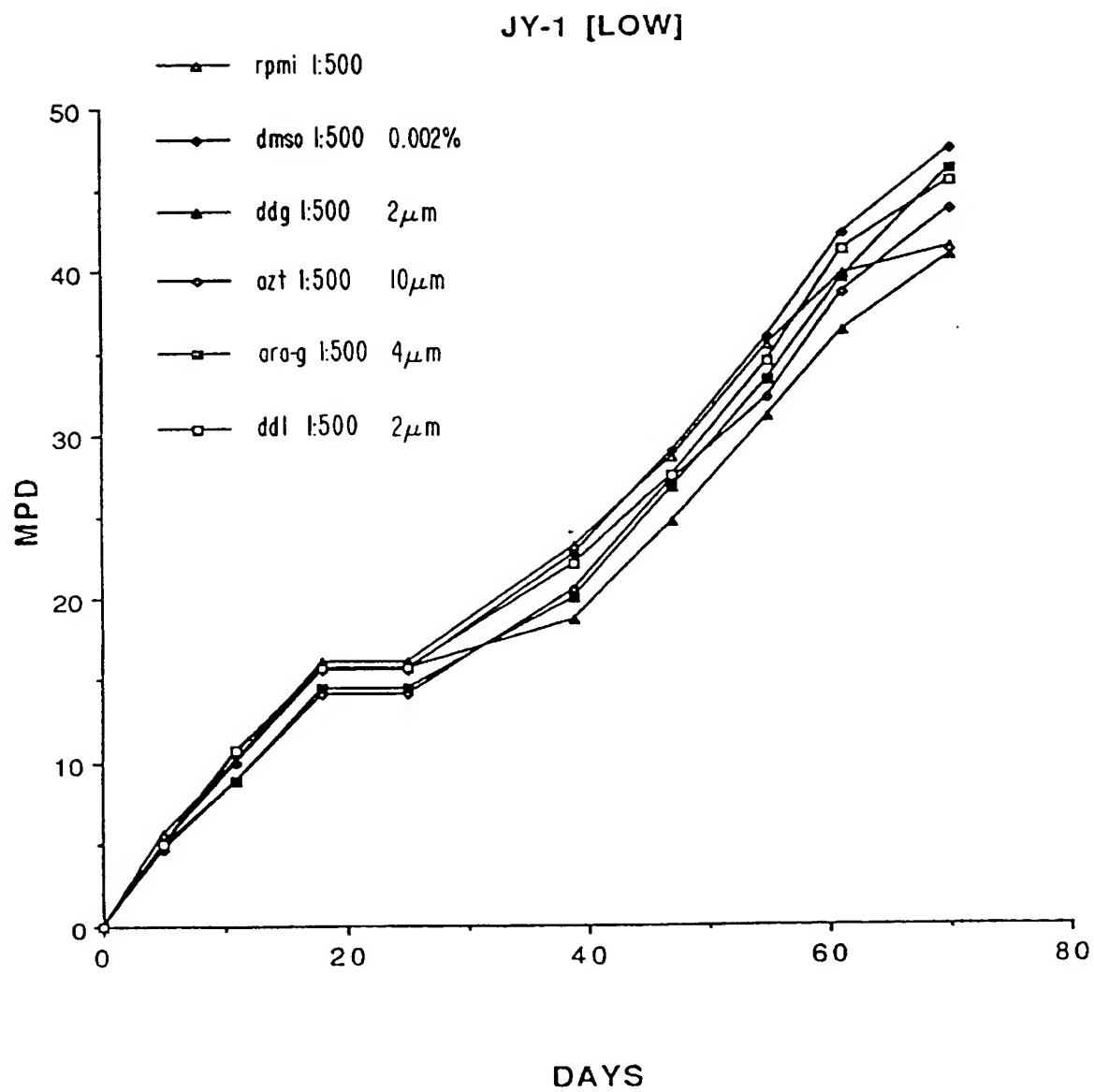
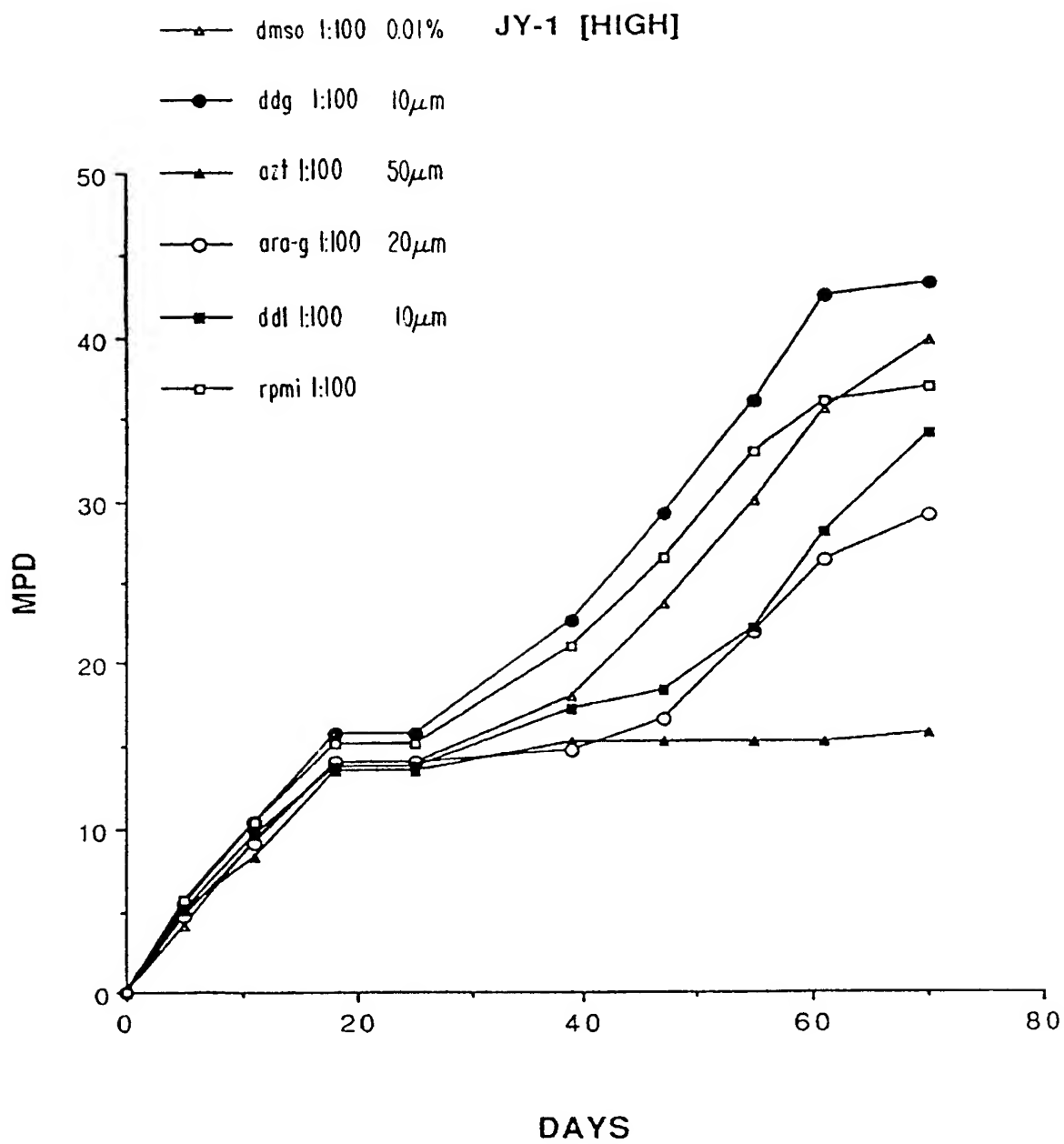
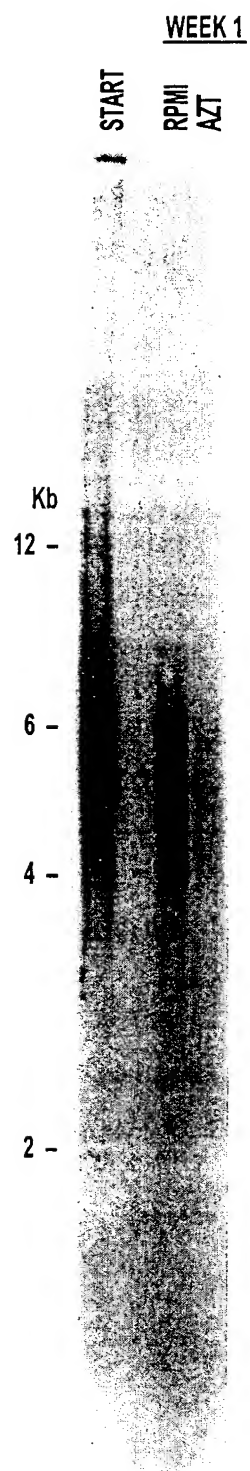


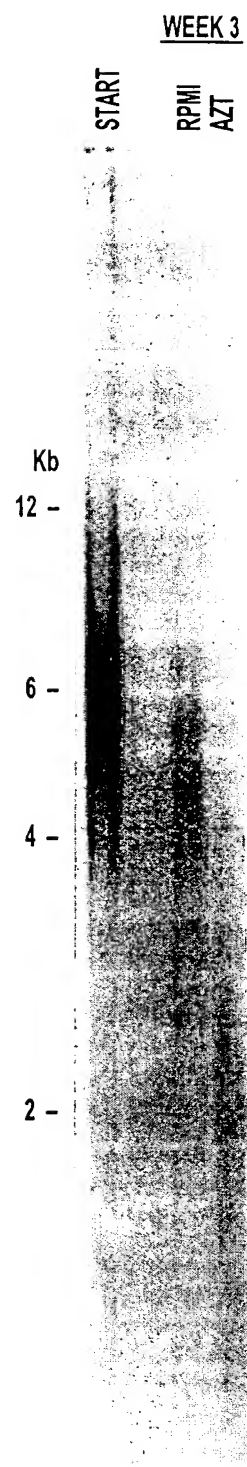
Fig. 23



**Fig. 24**



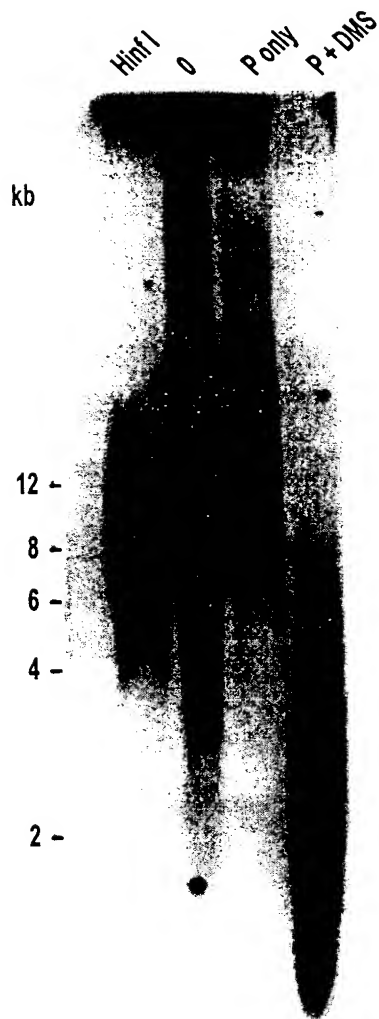
**Fig. 25A**



**Fig. 25B**



G-reaction:  
Measurement of  
Telomere Length



**Fig. 26**

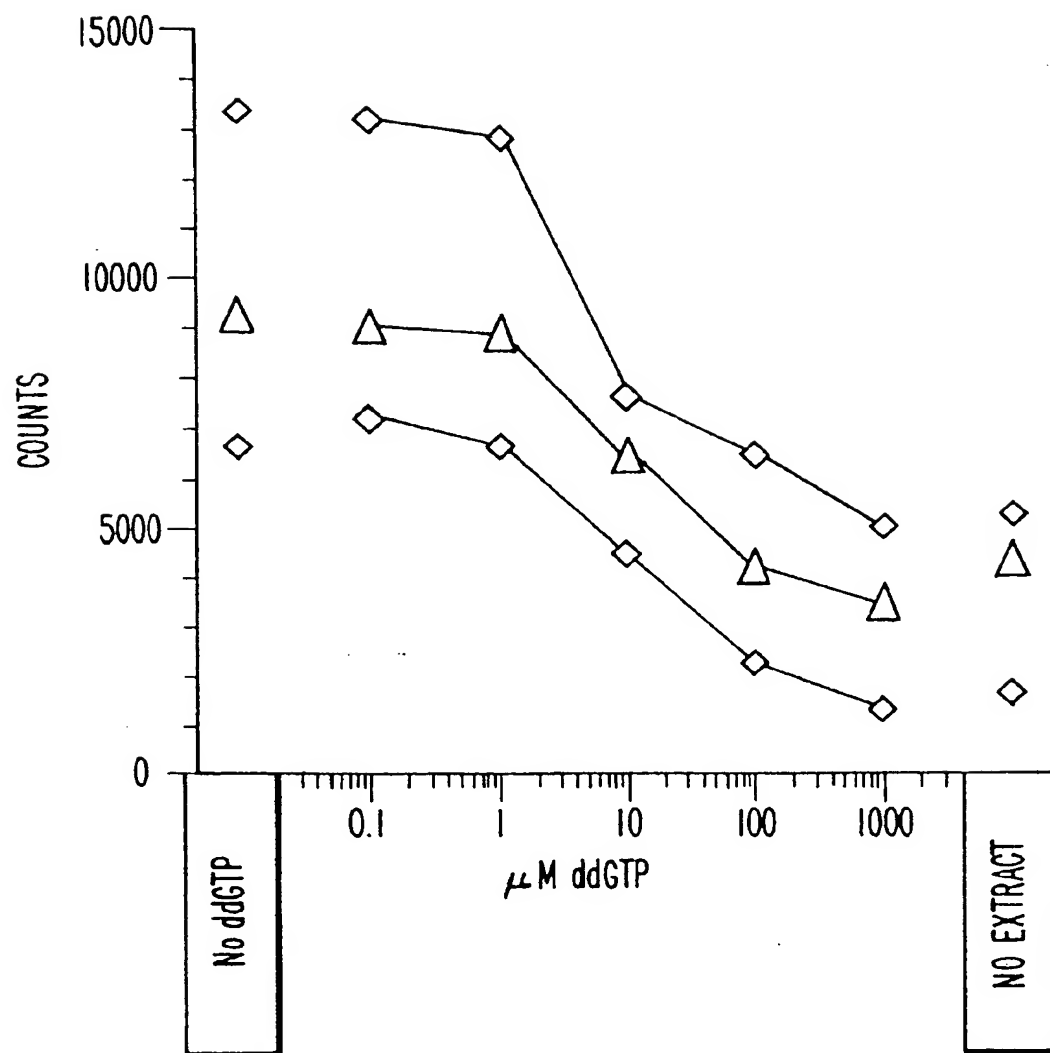
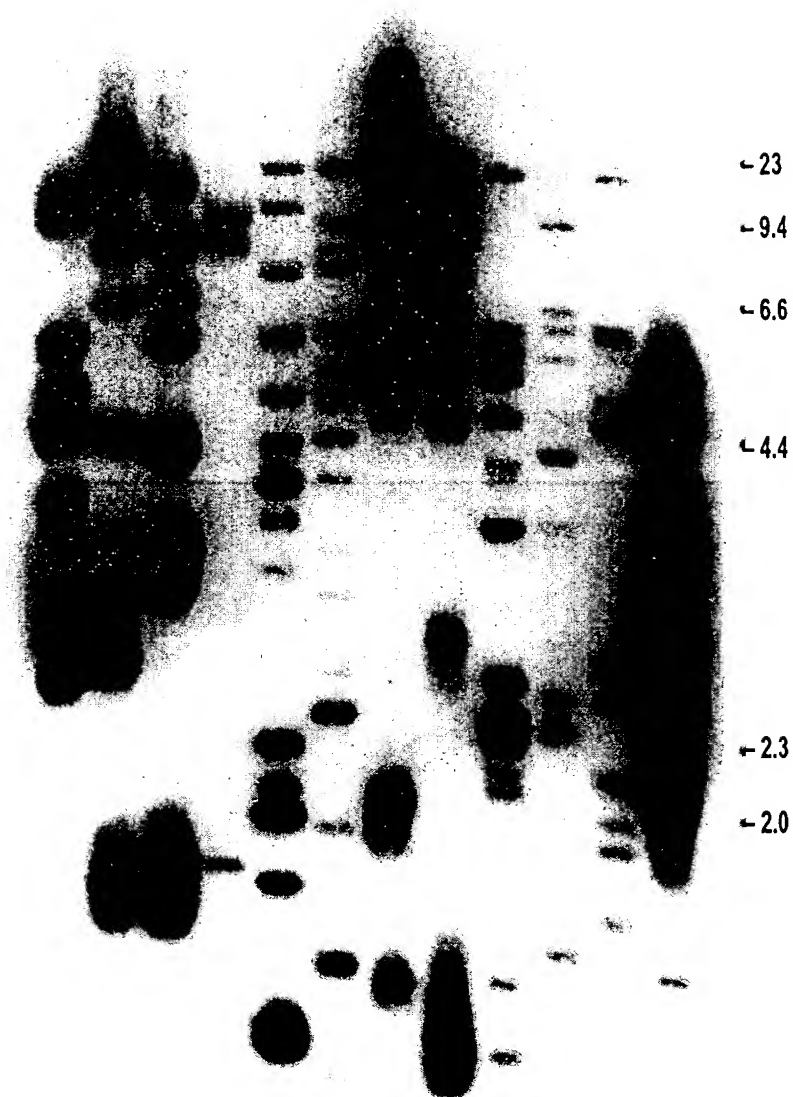


Fig. 27

*C. guji* B-3163\*  
*S. ser.* 674  
*C. guji* B-3176  
*C. pse.* B-4212  
*C. pse.* B-4296\*  
*K. lac.* B-4298  
*C. lus.* B-4303  
*C. tro.* B-4415  
*C. tro.* B-4416  
*C. mal.* B-4430  
*C. mal.* B-4431\*  
*C. tro.* B-4437  
*C. tro.* B-4438  
*C. tro.* B-4439  
*C. alb.* B-WO-1



**Fig. 28**

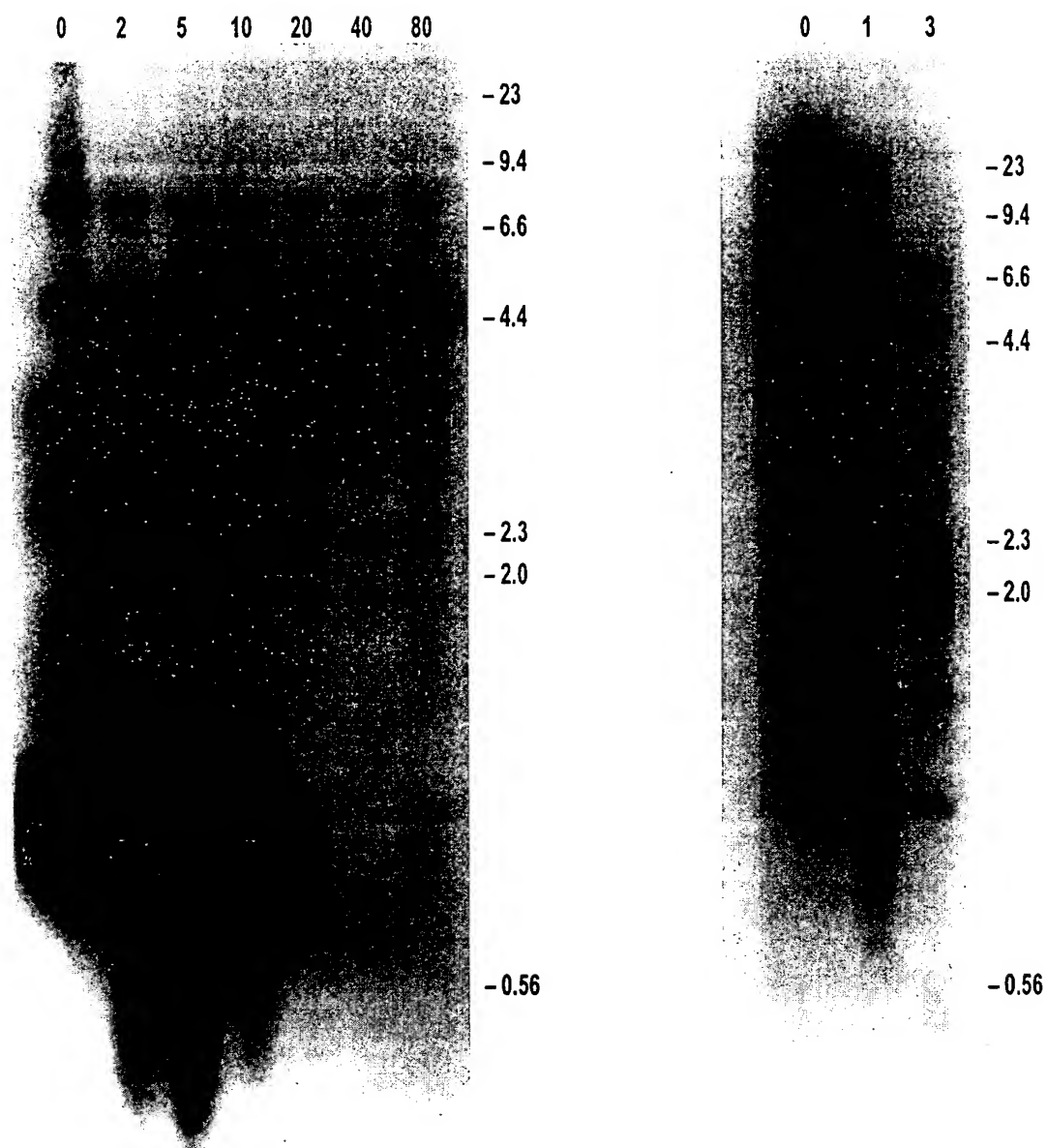
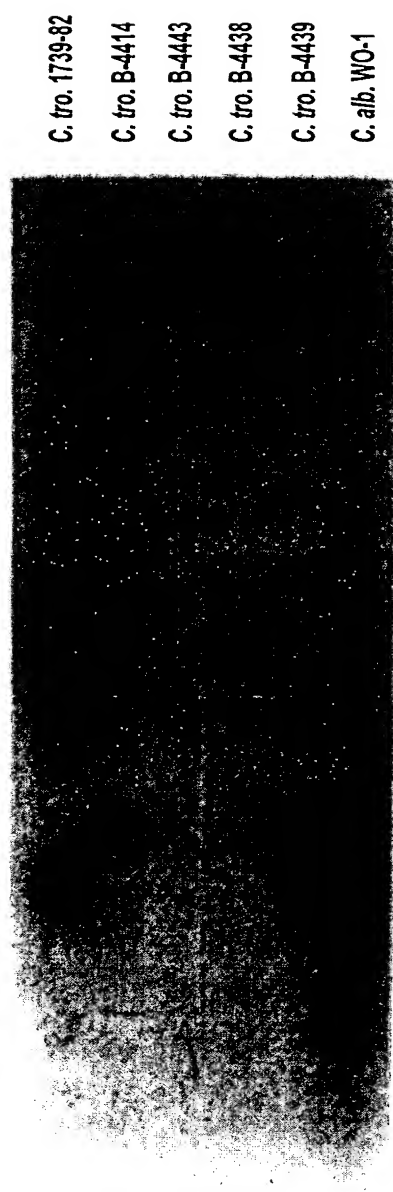


Fig. 29

| Species             | Telomeric Repeat                      |         |                                           |  |  |  |
|---------------------|---------------------------------------|---------|-------------------------------------------|--|--|--|
| <i>C. alb.</i>      | A C G G A T G T C T A A C             | T T C T | T G G T G T                               |  |  |  |
| <i>C. tro.</i> 4414 | A C/A G G A T G T C A C G A           | T C A T | T G G T G T                               |  |  |  |
| <i>C. tro.</i> 4443 | A A G G A T G T C A C G A             | T C A T | T G G T G T                               |  |  |  |
| <i>C. mal.</i>      | A C G G A T G C A G A C T             | C G C T | T G G T G T                               |  |  |  |
| <i>C. gui.</i>      | A C                                   |         | T G G T G T                               |  |  |  |
| <i>C. pse.</i>      | A C G G A T T T G A T T A G T T A T G |         | T G G T G T                               |  |  |  |
| <i>K. lac.</i>      | A C G G A T T T G A T T A G G T A T G |         | T G G T G T                               |  |  |  |
| <i>C. gla.</i>      | C T G G G T G C                       | T G     | T G G G G T                               |  |  |  |
| <i>S. cer.</i>      |                                       |         | T (G) <sub>2-3</sub> (T G) <sub>1-6</sub> |  |  |  |

5' To End → 3'

Fig. 30



C. tro. 1739-82

C. tro. B-4414

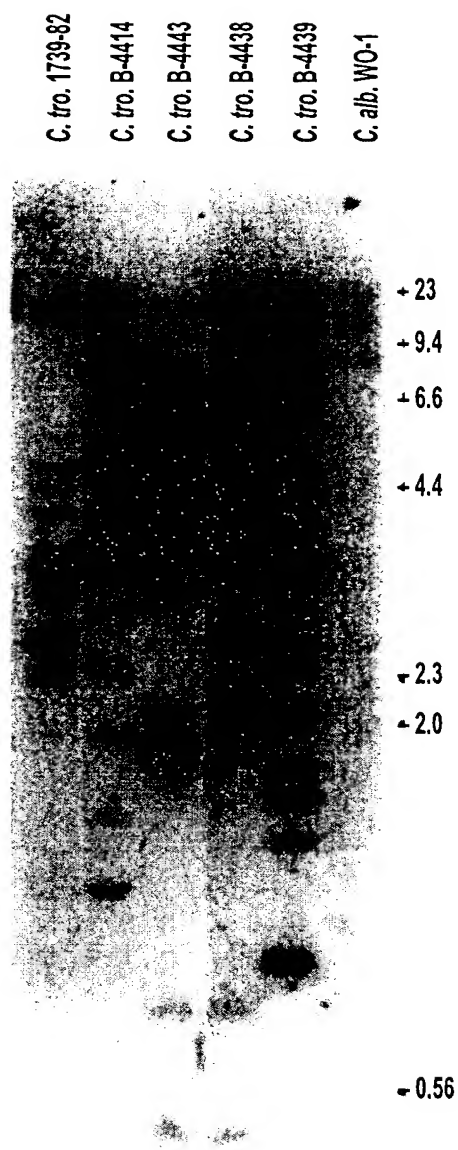
C. tro. B-4443

C. tro. B-4438

C. tro. B-4439

C. alb. WO-1

AC Probe



C. tro. 1739-82

C. tro. B-4414

C. tro. B-4443

C. tro. B-4438

C. tro. B-4439

C. alb. WO-1

+ 23

+ 9.4

+ 6.6

+ 4.4

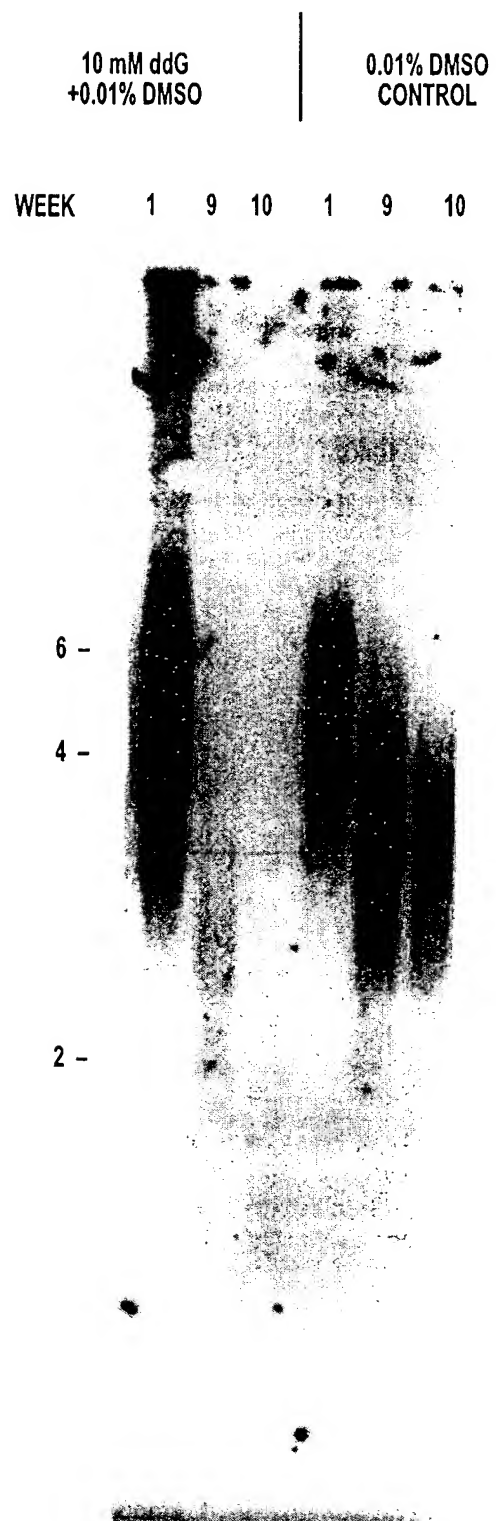
+ 2.3

+ 2.0

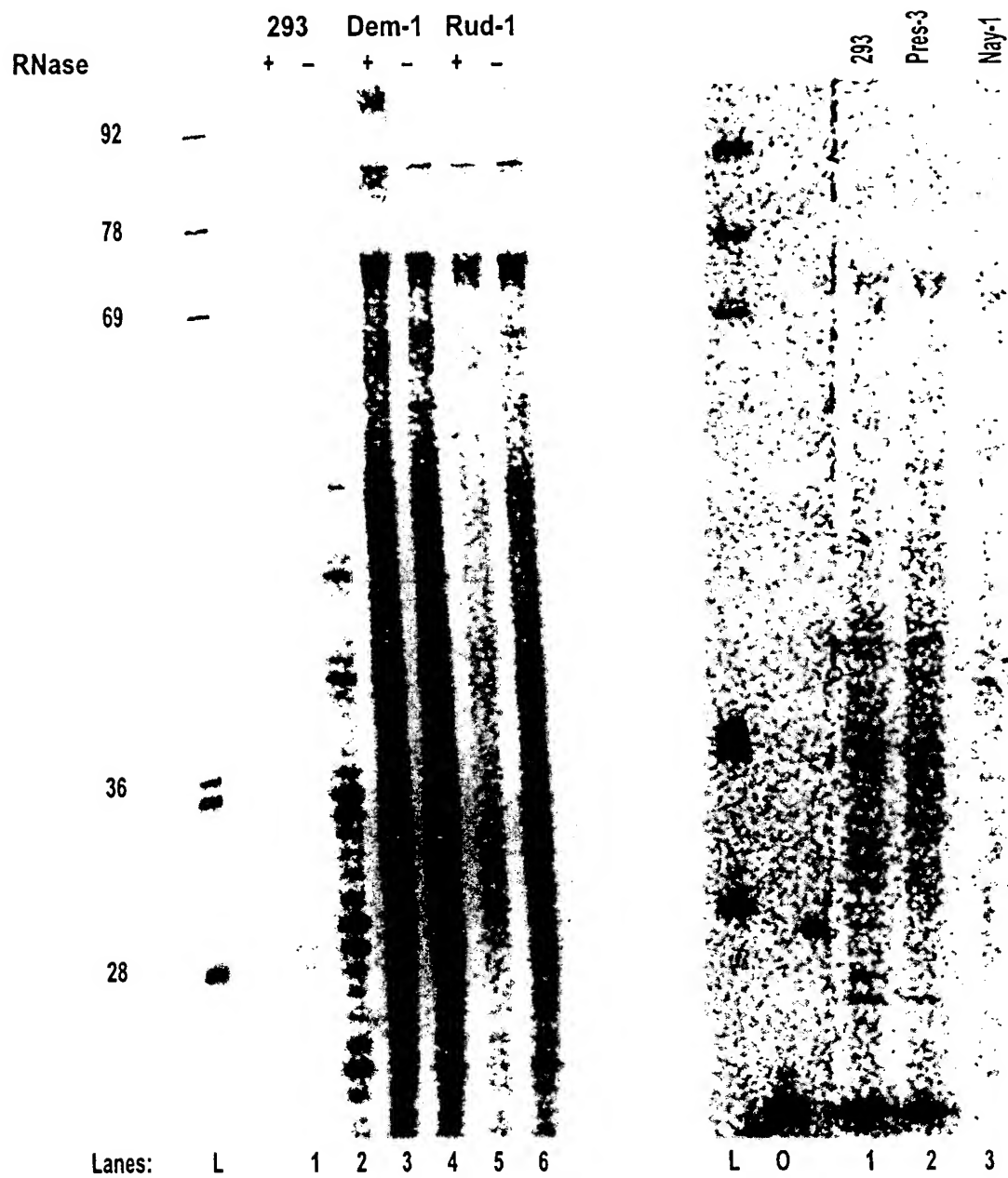
+ 0.56

AA Probe

**Fig. 31**



**Fig. 32**



**Fig. 33**